

REMARKS

Claims 7, 9-18 and 20-23 are pending in the present application. Claims 9-14, 18, 22 and 23 have been amended. These amendments add no new matter to the application. Support for the amendment made to claims 9, 11, 14, 18 and 22 is found in paragraph [1003]. Support for the amendment made to claim 10 is found in paragraphs [1003] and [1029]. Support for the amendment made to claim 12 is found in paragraph [1029]. Support for the amendment made to claims 13 and 23 is found in paragraph [1028]. In view of the foregoing amendments, and remarks that follow, Applicants request favorable consideration and timely indication of allowance.

In the Office Action mailed 6/14/05, the Examiner objected to claim 15 under 37 CFR 1.75(c), rejected claims 9-18 and 20-23 under 35 U.S.C. §102(e) as being anticipated by U.S. patent 5,958,018, Eng et al.

CLAIM 15

On page 2, paragraph 1, the Examiner objected to claim 15 under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant respectfully disagrees with the Examiner's interpretation of claim 15. Claim 15 does further limit claim 14. It discloses that more than one access point is in communications with the remote user. This situation could occur, for example, during a handoff.

CLAIMS 9-18 and 20-23

On page 3, paragraph 4, the Examiner rejected claims 9-18 and 20-23 under 35 U.S.C. §102(e) as being anticipated by U.S. patent no. 5,958,018 ("Eng et al.").

CLAIMS 9 and 11

With respect to claim 9, the Examiner states on page 3 that “figure 22, element 25 as read in col. 3, lines 59-60 where each AP has the control modules” is a plurality of control points. Element 25 is not a control point because it does not include many functions used to manage wireless links. “[P]rogram module 25 . . . controls the operation of modules 26 and 27. . . . [M]odule 26 determines if the MAC frame from a mobile is addressed to a local application or is addressed to another mobile.” See col. 7, line 63 to col. 8, line 6 of Eng. “For the latter case, the routing module reroutes the received cell to its destination via node switch 27.” Col. 8, lines 47-49 of Eng.

On the other hand in the present patent application “A control point 122 . . . manages the wireless links 114-120. Management includes many functions [such as] caus[ing] the user terminal 112 to transmit with the minimum amount of power required to be received by at least one of network access points 106-110.” See paragraph [1003] of the specification. The feature “control communications between a remote user and at least two of said plurality of network access points including control of said remote user’s transmit power” has been added to claims 9 and 11 to clarify that “controlling communications between a remote user and at least two of said plurality of network access points” is more than just routing data as disclosed by element 25 cited by the Examiner. Col. 7, line 60 – col. 8, line 28 of Eng discloses only controlling MAC frames, i.e., controlling the flow of data. Since Eng does not disclose all the features of claims 9 and 11, claims 9 and 11 are patentable over Eng.

Furthermore, claim 11 discloses “a plurality of routers.” This feature is not found in Eng. The Examiner states that FIG. 22 discloses a router. In column 5, lines 5 – 7, Eng states “the locate message may be broadcast to the APs in the network in a conventional manner.” Clearly, Eng discloses broadcasting to APs in *only* one network, i.e., “the APs in the network.” Routers are used to route packets between two or more networks. Furthermore, the two networks may or may not be similar. See William Stallings, “Data and Computer Communications”, Prentice Hall, New Jersey, p. 528. Although the switch 27 in FIG. 22 routes

cells, see col. 8, lines 47-49, it does not route the cells between networks. Instead, as stated by the Examiner, it routes cells from one access point to another. On page 10, the Examiner states that the elements 12-1 to 12-N are functionally equivalent to smaller networks within the larger network of figure 1. However, these smaller networks are connected by a message distribution system 10, such as an ATM network. See col. 2, lines 35-37 of Eng. They are not connected by a router. Thus, even assuming 12-1 to 12-N are functionally equivalent to smaller networks within the larger network of figure 1, Eng does not disclose routers or communicating with at least two of said plurality of routers. Thus, Eng does not disclose all the features of claim 11. Since anticipation requires that all elements of a claim be disclosed in one reference, Eng does not anticipate claim 11.

CLAIMS 10, 12 and 13

With respect to claims 10, 12 and 13, The Examiner argues on page 4, 5 and 6 that the routing module disclosed in FIG. 22 and in col. 8, lines 43-49 and the translation table disclosed in FIG. 5 “act as a co-located foreign agent for roaming mobiles” and “as a home agent.” Eng does not disclose a “home agent [that] encapsulates said data in packets destined to a current care-of-address of said remote user” as disclosed in amended claim 13 or disclose whereby said foreign agent de-capsulates packets of said data as disclosed in amended claim 12.

Encapsulation refers to a process of enclosing an original datagram as data inside another datagram with a new IP header. Upon receiving the encapsulated datagram, the foreign agent strips off an outer header to reveal the original datagram and delivers it to the mobile unit 130 on the foreign subnet. See U.S. pat no. 6,535,493 B1 col. 6, lines 35-49.

Instead, in Eng if a “received MAC frame is addressed to [a] mobile served by another AP” and the address is “stored in the translation table”, the MAC frame is passed to “conventional AAL5 software, which then segments the frame into cells and forwards each cell, in turn, to the routing module software [which] appends the routing information to each cell it receives from the AAL5 module and delivers the result to the AHAL (ATM Hardware Abstraction Layer) software module.” col. 8, lines 33- 43. The routing module reroutes the received cell to its destination via node switch 27. col. 8, lines 47-49. Thus, Eng does not

encapsulate said data as disclosed in claim 13, but instead, segments the frame. Furthermore, Eng does not de-capsulate said data as disclosed in claims 10 and 12. Since Eng does not disclose all the features of claims 10, 12 and 13, claims 12 and 13 are patentable over Eng.

Furthermore as discussed below with respect to claim 23, in Eng the access point that the mobile is associated with switches when it leaves a coverage area served by a first AP, AP 21-2, and enters a coverage area served by another AP, AP 21-3, thus causing the home IP address to change. Col. 6, lines 22 – 33 of Eng. This teaches away from using a home agent and a foreign agent to maintain a static home address as discussed below.

In addition, claim 10 is allowable over Eng because it includes the feature “control communications between a remote user and at least two of said plurality of network access points including control of said remote user’s transmit power” to clarify that “controlling communications between a remote user and at least two of said plurality of network access points” is more than just routing data as disclosed by element 25 cited by the Examiner.

CLAIMS 14-17

Claim 14 has been amended to include the feature, “and said control point controlling said remote user’s transmit power” to clarify that “two or more access points . . . under control of a control point” is more than just routing data as disclosed by element 25 cited by the Examiner on page 6 of the Office Action. Since Eng does not disclose all the features of claim 14, claim 14 is patentable over Eng. Claims 15-17 are allowable because they depend on allowable claim 14.

CLAIMS 18-21

On page 7 the Examiner argues that Eng discloses all the features of claim 18 including “the control point controlling the transmitting network access point is not co-located with said transmitting network access point.” For support, the Examiner cites figures 2 and 22 of Eng stating “since each AP has its own control point co-located with it, and the remote servicing AP

controls the remote mobile, the control point is not co-located with the transmitting network access point, it is collocated with the remote servicing AP.” Even if it is assumed that what the Examiner states is correct, i.e., that the remote servicing AP controls the remote mobile, this does not mean that the transmitting network access point is controlled by a control point not co-located with it. Furthermore, claim 18 has been amended to include the feature, “and said control point controlling said remote user’s transmit power” to clarify that “the control point controlling the transmitting network access point” is more than just routing data as disclosed by element 25 cited by the Examiner. Last, since Eng does not disclose all the features of claim 18, claim 18 is patentable over Eng.

With respect to claim 20, the Examiner cites col. 8, lines 43-49 of Eng and states “whereby switching the cell to the appropriate node, the control point has effectively switched control to the remote servicing AP’s control point.” See page 8 of the Office Action. Applicant respectfully disagrees with the Examiner’s interpretation of Eng. In col. 8, lines 43-49, it states that a “routing module reroutes the received [ATM] cells [or data] to its destination via node switch 27.” Thus, data is switched or routed by node switch 27. However, the control discussed in claim 20 is the control of the access point, not just the control of the flow of data. Since Eng does not disclose all the features of claim 20, claim 20 is patentable over Eng. Furthermore, claim 20 should be allowed because it depends on allowable claim 22.

Claims 19 and 21 are allowable because they depend on allowable claims 18 and 20 respectively.

CLAIMS 22-23

Claim 22 has been amended to include the feature, “including control of said remote user’s transmit power” to clarify that “the control point controlling the transmitting network access point” is more than just routing data as disclosed by element 25 cited by the Examiner on page 8 of the Office Action. Furthermore, as discussed above with respect to claim 11, Eng does not disclose “a plurality of routers.” Since Eng does not disclose all the features of claim 22, claim 22 is patentable over Eng.

Claim 23 is allowable because it depends on allowable claim 22. In addition, claims 23 is allowable for a second reason. Claim 23 has been amended to include the feature “whereby said home agent encapsulates said data in said packets destined to a current care-of-address of said remote user.” As discussed above with respect to claim 13, Eng does not disclose this feature. Furthermore, on page 9 of the Office Action, the Examiner cites col. 7, lines 19-26 of Eng and states “whereby sending the home update message, the newly associated AP has effectively become the home agent of the mobile.” The applicant respectfully disagrees with the Examiner’s interpretation of Eng. Col. 7, lines 21- 23 of Eng states “AP 21-3 sends a “home update” signaling message to AP 21-1 which, inter alia, (a) indicates that mobile m₂ is now associated with AP 21-3 . . .” On the other hand, the language of claim 23 does not state that “the newly associated AP has effectively become the home agent” as stated by the Examiner. Instead, the language of claim 23 states that the “each of said plurality of home agent being associated with one of said plurality of routers.”

"Mobile IP" is a functionality in wireless communications where mobile terminal devices connected to the Internet may send and receive packets addressed with their home network IP (Internet Protocol) address (a static IP address) while their current point of attachment to the Internet (i.e., their current interworking function) changes. This allows the mobile terminal device to maintain its connection with another entity through a packet-based link, and facilitates two-way communication over that link. See col. 1, lines 17-23 of U.S. patent no. 6,424,639 B1. All packets between the Internet host and mobile node use the mobile node's home address regardless of whether the mobile node is on a home or foreign network. The care-of address is only used for communication with mobility agents and is never seen by an Internet host. See Kessler, Gary C. "Future mobility: Mobile IP is the harbinger of untethered computing", Telephony, Sept. 21, 1998 <http://bg.telephonyonline.com/ar/telecom_future_mobility_mobile>.

In Eng, the access point that the mobile is associated with switches when it leaves a coverage area served by a first AP, AP 21-2, and enters a coverage area served by another AP, AP 21-3, thus causing the home IP address to change. Col. 6, lines 22 – 33 of Eng. This teaches away from using a home agent and a foreign agent to maintain a static home address.

Thus, Eng does not disclose “a plurality of home agents, each of said plurality of home agents being associated with one of said plurality of routers” as disclosed in claim 23. Since Eng does not disclose all the features of claim 23, claim 23 is patentable over Eng.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants submit that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application are earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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